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Section 1: Leadership

Welcome to Edition 11 of the DL STAR!





I am excited to present this volume of the DL STAR. This issue presents five new perspectives. Dr. Kristy Murray and Mr. Jonathan Poltrack from the Advanced Distributed Leaning (ADL) Initiative look to the future and see new technologies that make the learning process easier in their article, "The Next Generation Learning Environment: Phase I-Moving to a New Shareable Content Object Reference Model" (SCORM). They discuss using a Personalized Assistant for Learning (PAL) and a new SCORM.

LTC James T, McGhee, who has been leading the Connecting Soldiers with Digital Applications (CSDA) effort at the Mission Command Center of Excellence, comments on both the security challenges of mobile learning and the issues surrounding finding the "right" mobile device. "Delivering Training and Education Content at the Point of Need" speaks to the natural tendency to forget that not everything we provide to the field is classified, or for that matter, requires redevelopment. We have a lot of content developed over the years that is not classified and is ready for export now.

Mr. Ken Crim takes a critical look at the DL



environment, in, "It's Not About the Technology!" We all have to set aside our love of devices and browsers for a moment to consider what we are really dealing with in the Army Learning Model (ALM). Is it more important to understand how and why Soldiers, Leaders, and Army Civilians learn or to ensure they have the latest technology devices at their disposal?

Next, Ms. Peggy Kenyon, Chief of our Courseware Management Office, offers her insights and guidance on the new Combined Arms Products for Distributed Learning (CAP-DL) contract.

Finally, Ms. Regina S. Albrecht in her article, "Learning Innovation Office Delivers Digital Training for Future Operational Environment," provides a glimpse on how the Intelligence Center of Excellence (CoE) implemented six training programs.

This edition also provides significant dates that affect the DL community. In addition, we include websites of other learning communities and their prospective in accomplishing their DL mission.

We are embarking on exciting and challenging times for our program. To ensure we are leaning forward in modernizing TADLP, we crafted The Army Distributed Learning Program (TADLP) Strategic Plan that highlights our mission and goals and describes how this program augments and supports the ALM. We have vetted the TADLP Strategy with our stakeholders and briefed its intent to the Institutional (IT)/DL Council of Colonels.

We are also working diligently in preparation for the Army's 11th Annual DL Conference entitled, "Implementing the Army Learning Model: The Role of Distributed Learning." This year, in addition to the conference, we will also conduct a DL Program Management Review (PMR) and the Technical Change Control Board (TCCB), making for a challenging and productive week.

DL content must be discoverable, accessible, playable, trackable, and flexible in order to implement the ALM. To insure these tenets are achievable, we

working with many other Army agencies in conducting a DL Deep Dive/Rehearsal of Concept (ROC) Drill to enhance the learner's DL experience.

I encourage you to visit TADLP website and join our Facebook and Interlink blog. Use these tools to share your opinions or ask questions. We designed these sites to capture your knowledge and share it with other members of the DL community. If you have any questions about the current articles or would like to submit a future article for publication, please contact us @usarmy.jble.tradoc.mbx.atsc-tcm-tadlp@mail.mil

We are proud to serve and support!

Helen A. Remily TRADOC Capability Manager The Army Distributed Learning Program

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The Next Generation Learning Environment: Phase I – Moving to a New Sharable Content Object Reference Model (SCORM)

The Context: Envisioning a Personalized Assistant for Learning

In 2011, the Advanced Distributed Learning (ADL) Initiative embarked on a new, long-term research and development effort. The ultimate goal is to create a Personal Assistant for Learning (PAL). The PAL we envision will be able to anticipate learner needs, seamlessly integrate multiple information sources, and provide ubiquitous access to effective, personalized learning content and/or job performance aids that can be accessed from multiple devices and platforms.

To be effective, the PAL environment must meet several requirements. It must allow learners to seamlessly access a network of capable peers and/or mentors; train in multiple environments that include virtual worlds, mobile learning, serious games, and simulation; and assess and track performance throughout the learning process from multiple platforms/devices. The PAL's interface must enhance the user experience for every learner in an easy-touse and effective manner. Knowledge and information must be capable of being shared across the and must environment be available anytime/anywhere. Intelligent agents embedded in the PAL must ensure the user is known and the content provided to each user is adapted to each person's profile and associated competencies.

Although advances in technology accelerate us towards realizing a true PAL capability, the integration of this technology into a solid and seamless PAL system is estimated to be at least 10 years out. Several of our new, short-term R&D projects target capabilities that can be integrated into the eventual realization of the PAL vision. Our near- term research is focused on two key areas: the Next Generation and

the Next Generation Learning Environment.

Next Generation Learner

Future learner research focuses on exploring ways learners can enhance learning skills and acquire greater cognitive adaptability through personalized, non-linear, technology-mediated experiences. Our research is particularly interested in understanding how we can best situate learners at the center of next generation learning environments. This research encompasses learners within military, public/private education, technical or trade schools, and even self-taught learners.

Next Generation Learning Environment

Learning environment research focuses on the access to individualized and relevant learning material that is provided where it is needed and delivered on a learning platform that best suits the This learner's needs. will require communication between systems and among content types. It is also critical that the learner is "tracked," i.e., the learner is assessed and the scores (if applicable) are provided and accessed via the learning environment. The environment must incorporate social media (peer-to-peer communications); non-linear learning experiences, and includes the integration of emerging technologies.

Keeping Focus – Understanding what the Community Wants

With achieving the PAL vision always in mind, we have engaged in Phase I of the next generation of SCORM. Our efforts to explore the SCORM aspects of the Next Generation Learning Environment started with addressing this question: What do you want to do that is impossible or difficult with SCORM or other current e-learning architectures?

We reached out to the e-learning community last year to gather their requirements. The results represent the compilation of hundreds of responses from the community, over a hundred third party whitepaper

reviews, and a multitude of ADL Help Desk tickets submitted over the last twelve years. *The consensus:* The results are consistent regardless of their source: DoD, Government, Academia or Industry. We generated a prioritized "wish list" based on the frequency of the requirement occurrence and by polling the community that participated in the requirements gathering effort. According to the community at large, the next generation of SCORM should:

- Track diverse user learning experiences such as social media, mobile learning, games, simulations, and mixed modality exercises.
- Move beyond the single-learner model to allow team-based exercises, collaboration, and direct instructor intervention.
- Eliminate out-of-date technology practices such as the idea that all content needs to fit into a "package."
- Improve or eliminate the content sequencing and ineffective requirements.
- Include tools, guides, and best practices to make the learning curve for the next generation of SCORM easier.
- Provide clearer instructions and more efficient testing to make content work across systems.
- Allow content to function in situations where access to network infrastructure is limited or intermittent.
- Provide a means to share user data with instructors while keeping assessment data secure.

Moving Forward - Making the Plan Actionable

The requirements for the next generation of SCORM are varied in scope, size, and difficulty, but after collecting lessons learned via several proof-of-concept prototypes, our technical experts determined the readily achievable next step to be a service-based successor to the current SCORM Run-Time Environment (RTE). The SCORM RTE allows content to *get* and *set* values in a Learning Management System (LMS). This includes, but is not limited to RTE

scores, objectives, and interactions. The SCORM RTE is based on ECMAScript (JavaScript) and as a *player*. This restriction makes it difficult to use newer and emerging technologies such as games, virtual worlds, and mobile phone native applications as part of an e-learning curriculum. Several other collected requirements are also either fully addressed or at a minimum, enabled, by a new service-based RTE.

Also in progress is a draft specification and prototype for an application programming interface (API) based on Activity Streams. An Activity Stream is a computer-readable statement that includes a noun, verb, and object. For example, an Activity Stream from the social media domain may be used to indicate that a user likes a book - "Jonathan likes 'The Odyssey'." The Activity Stream specification is an active project under the Open Web Foundation, with support and contribution from the web-based services used by many daily. The working group defined a set of Verbs and Objects to give an idea of what types of interactions can currently be modeled using streams. Facebook has recently released its own implementation of the Open Graph Protocol, which makes verbs and objects extensible - allowing them to be defined by applications connected to Facebook. For example, instead of saying "Jonathan likes 'The Odyssey," Open Graph will allow applications to report that" Jonathan read 'The Odyssey" (or"Jonathan hiked The Appalachian Trail").

While the idea of *Activity Streams* is interesting, making the data in an LMS transferable to other systems requires a way to exchange all these nouns, verbs and objects so that across different systems, the data exchanged holds some shared meaning.

For help with this challenge, we are looking at the work being done through Schema.org, which creates schemas (i.e., tags) for web content to mark *creative works* (generic term for any type of media) such as videos, images, articles, blogs, etc. Possible verbs for creative works may include *posted*, read, completed, authored, listened, watched, commented, rated, and

liked. Tagging content as prescribed by schema.org is what enables the Semantic Web — converting the current web of unstructured documents into a "web of data" that may be intelligently consumed by other computers. Depending on how the resource is tagged (e.g. article), contextually corresponding verbs (e.g. read, commented, rated) are available for the resulting activity stream. We are actively researching how to best use activity streams for learning purposes. This work encompasses Phase I of the next generation of SCORM.

What Does This Mean for SCORM?

We have scoped the next generation of SCORM such that it is a defined, manageable but useful component. But, how does this fit in with other technologies? What about existing content?

Our plan is for the technologies in the next generation of SCORM to be *stackable*. This means that they can be used with other suites of technologies. For example, a SCORM package and manifest could be used to organize content that will communicate with activity streams into a cohesive instructional unit like a *course*. We are also investigating *wapping* SCORM content such that it is tricked into thinking it is running in a SCORM LMS, but is actually running in a proxy environment that is converting the SCORM RTE to the next generation of SCORM seamlessly, transparently and with little effort.

This project is still in its infancy but is starting to build momentum. Check out http://www.adlnet.gov/ for the latest news and announcements and to get information on how you can contribute as we move forward to the Next Generation of Learning.

The ADL Initiative was established in 1997 to standardize and modernize training and education management and delivery and is part of the Department of Defense Office of the Deputy Assistant Secretary of Defense (Readiness).





Dr. Kristy Murray is Director of the Advanced Distributed Learning (ADL) Initiative. ADL supports its mission of assisting the Federal Government and Services to integrate ADL standards and emerging technologies into their programs by conducting outreach, research, and prototype development. Dr. Murray holds a doctorate degree in Instructional Technology and Distance Education.



Jonathan Poltrack has been involved with the ADL Initiative since 1999. As a software engineer, he was an early contributor to the Sharable Content Object Reference Model (SCORM). He currently leads the ADL technical team in transitioning to the Next Generation SCORM and specifying a new learning platform to support new types of systems and content. Jonathan is a contractor with Problem Solutions.

Delivering Training and Education Content to the Point of Need

The past few years have seen a worldwide explosion in the sale and use of mobile electronic devices such as "smart" phones and tablets. An entire generation of learners is becoming as familiar with the iPad as they are with a television. Academic institutions across the United States are beginning to see the value of these devices in enhancing the learning experience of their students. However, educators will most likely not be able to assess the full value of these new technologies for many years. The speed at which industry is able to develop and manufacture increasingly powerful devices makes it difficult to keep up with the educational benefits of the latest mobile capabilities.

The Army, through its Connecting Soldiers with Digital Applications (CSDA) initiative, is exploring the value of these devices in order to support the visions outlined in the Army Learning Model and Doctrine 2015, to provide the Soldier with Army information, doctrine, and training and leader development content at the point of need. Two years of continuous concept exploration through various pilot programs at Army Centers of Excellence have clearly demonstrated value in delivering Army information, along with training and leader development content, to the Soldier through mobile electronic devices.

Far too often, the discussion about the military use of mobile electronic devices turns to Information Assurance (IA) and the inability to connect commercial mobile devices to the Department of Defense (DoD) Networks. The security risks associated with mobile devices are real. According to a Global Study on Mobility Risks, 51% of businesses surveyed lost data last year due to employee use of mobile devices. (How did the use of mobile devices result in lost data? What kind? The Department of Army Chief Information Officer (CIO/G6) takes these threats very seriously but is also looking for a solution that will provide the Army with a "secure" mobile device(s) similar to its current use of the Blackberry. Whether a solution is

The Army Training Network (ATN) is a single web-based portal for Army training resources.



http://www.train.army.mil/



The U.S. Army Distributed Learning System (DLS) acquires, deploys and maintains a worldwide learning infrastructure that innovatively combines hardware, software and telecommunications resources with training facilities and course content to deliver a cohesive, Webbased solution.



http://www.dls.army.mil

announced this year or next, it is unlikely that the Army, given current resource constraints, will be able to purchase enough devices to issue an approved device in great quantities to the field.

Even with all these concerns, there is no need for the Army or its institutions of learning to wait for a secure mobile solution. According to a recent Army study conducted by the TRADOC Analysis Center (TRAC) at select Army Centers of Excellence, the number of Soldiers attending Army schools who own a personal mobile device exceeds 75%. It's the "Bring Your Own Device" solution that will enable the Army to move forward with the development and delivery of unclassified Army publications, doctrine, and training content at the point of need. It's all about the content. The majority of the Army's doctrine and training content is unclassified and approved for public release. While the Army waits for a secure solution that will allow an approved mobile device to access DoD networks, it has enough unclassified material available to convert to mobile formats to keep doctrine writers and training developers employed for several years.

What Army learning institutions can do today is train their personnel to format doctrine and training content for mobile devices. Outdated portable document format (PDF) files continue as the Army standard for mobile delivery but their use on most mobile devices does not provide a user-friendly experience. industry standard format for most mobile devices is the ePUB. The ePUB and Apple's new revolutionary iBook are both outstanding formats that can deliver a positive user experience that enhances and sustains learning at the point of need. Along with outdated formats, the Army continues to follow outdated publishing directives tied to traditional paper printing requirements. Through mobile delivery, the content developer is no longer constrained by archaic rules, such as the requirement for all photos, maps, and charts to be delivered in grey scale to avoid the excessive costs associated with color printing.

Content and training developers should be moving forward to develop their skills, learn the process and begin formatting all of their unclassified material as ePUBs.

TRADOC is moving forward to establish an ePUB policy along with a public accessible Central Army Registry and supporting Apple and Google Apps to distribute ePUB files to personally owned mobile devices. The mobile revolution of content delivery is upon us and those who choose not to move forward rapidly are doomed to fall behind. For more information on CSDA, formatting content for use on mobile devices, or delivery of content through mobile apps, contact the Mission Command Center of Excellence's CSDA POC, LTC James T. McGhee at 913-684-6356, or james.mcghee1@us.army.mil.

This networked community is designed to help educators develop powerful learning experiences for students through the effective integration of new technologies.

Education with New Technologies: Networked Learning Community

Designed to help educators develop, enact, and assess effective ways of using new technologies.

http://learnweb.harvard.edu/ent/home/index.cfm

It's Not About the Technology!

As Americans, we go through several cycles before we get things right. It is part of our make-up, perhaps our DNA, that we have to make mistakes before we determine the correct path. Americans love to go from one extreme, find out it does not work, go to the other extreme, find out it also does not work, then finally reach a middle ground that does work. One can sit in an average high school lunchroom at the faculty table and see this in action. On the one extreme you have the veteran teachers for whom a white board and the occasional video (hey, who wants to talk for an hour) is high technology. On the other extreme is the young Gen-Y teacher, fresh from the best educational colleges who literally has the entire curriculum on his/her own website and spends that hour in class essentially sitting there in case a student has a question. It is a great job if you can get it. Spend fifty or so hours during the summer putting your entire curriculum on your personal web, then get paid every two weeks for the rest of the year to answer questions that might pop-up. Then of course there is the successful teacher who resides somewhere in the middle of the two. Why is that teacher successful and the others are not? That teacher has come to the blinding flash of the obvious: technology is just a tool!

It is amazing that in the military today, "Baby Boomers" make the predominate number of training and education decisions and their decisions specifically target Gen-Y'ers perceived technology It is no wonder that technology requirements. appears to be a driving force instead of what it is - a tool. Technology dominates our lives, the news, our daily habits, even what and how we think. To the "technologically challenged" generation of decision makers, it makes sense that they would want to jump. on technology so as not to short change all our younger personnel who have grown up on it. We make the assumption that the Gen-Y folks must have technology to learn. Yet three years ago a Stanford University study (the first one done by the way) on the

effects of technology on learning, showed that Gen-Y'ers were in fact wired and able to multi-task at a rapid rate. BUT, (and there is always a "but" when facts are actually examined), those same multitaskers were unable to concentrate on any one thing for very long. In essence, they were what technology had driven them to be, 15-second sound bites of information. The scary thing about the Stanford study was that it looked at students at MIT, supposedly the most brilliant on the planet. One student, the brightest of the group, was able to write brilliant paragraphs but was unable to bring an entire coherent thesis together because he kept going to other places during his multi-tasking. He was literally writing, texting, I-Pod'ing, and talking on his I-Phone all while trying to write a paper. Could this be technology as ADHD? The truly wonderful thing was that the student was totally unaware that technology was in fact hindering his brilliance rather than accelerating it. We see that every day in the poor writing skills of our young soldiers and officers. Another example comes from the Army two years ago. There was a huge push to give every soldier an I-Phone or Android. Why? Well because everyone in Gen-Y were using them and they were second nature. If that is the case, why issue them something they already have? Why were we issuing them? How many apps did we have for these phones? What would the soldier do with the phones during the 95% of the time he/she was not doing Army work on the phones? Again, what does the technology do to enhance the learning experience? These questions all need to be asked before we buy phones.

Technology is simply a tool. It is one of many tools in the big red Sears Craftsman Toolbox for the educator and trainer. It does not in and of itself impart knowledge and brilliance. It helps in the delivery of information. Essentially, it is not different from any other technology throughout the ages. Trog the caveman was probably the first to use technology. He used charcoal to draw a picture of a saber tooth tiger to emphasize to his pupils that this was one mean tiger.

Ichabod Crane used the technology of the slate board to outline lessons for his students in Sleepy Hollow. We all know the joy of the technological wonder of the dry erase board. Finally, we could wear dark colored clothes and not look like dandruff was pouring off our heads. Of course, there is Power Point, the scourge of briefs, the one thing that has brought on more sleep than Ambien or Tylenol PM combined. But what is it? It is simply another technology that replaces the dry erase board, overlays, pull down maps, etc.

So if technology is simply a tool from the big red toolbox, what is the driving force that necessitates going to the box? As trainers and educators, our primary mission is to first and foremost decide: what are the learning objectives I want for my students? What are the Tactics Techniques and Procedures I am trying to get across? What do I want them walking away remembering? Do I need them to apply what they have learned before they leave the classroom? And let's not kid ourselves, what is it going to cost? Once you have these answers, then you can go to the big red toolbox and pull out the proper tools to deliver the training in the most thorough and efficient way possible. Would you like to apply the learning in the classroom first before the field? Joint Knowledge On line's Virtual Cultural Awareness Trainer (VCAT) is a great tool because after the learning and assessment. the student can go into a virtual environment complete with avatars to apply what they have Do I want my students to arrive in my learned. classroom already prepared? As much as we thought homework was a teacher's method of making our lives miserable, it was actually to prepare us for the next class so we could be at a higher level and be ready to challenge and participate as opposed to sitting and listening to an endless lecture. Virtually every academic study will tell you that an engaged student's learning capacity increases exponentially. West Point has used Outcomes Based Education to engage students up front the moment they walk in. Marine Corps University Expeditionary Warfare School uses Tactical Decision Games (TDG) to the

same effect. If your current class spends a lot of time with lectures covering macro level subject matter, go to the toolbox. You may want to take the macro level information and put it online so that when the student arrives at the class, the student can be engaged immediately because that foundational knowledge is in place and the student's ability to learn increases. Now the instructor becomes the facilitator. Also, your eight-week class may now only be two weeks and one of those weeks can be devoted to application. These tools not only enhance the learning, but it allows for individualization as required; i.e. someone learning at a slower pace could go online and take extra modules for practice. Not only is it important for the tools to be in place for this, but the facilitator must be aware of the students' progress in order to implement/encourage this. Again, these tools exist in the big red toolbox. If this is beginning to sound familiar, it should. It is the essence of the Army Learning Model (formerly known as the Army Learning Concept 2015).

As you approach education and training, there is a lot of work up front. You first and foremost have to be the subject matter expert in what you teach. Then you have to develop a suitable curriculum. Then you have to decide how long it will take you to deliver that curriculum. And the increasingly important subject of available budget needs to be considered (hate to burst any bubbles but online does not always equate to cheaper). Once all of that has been done, you can go to the toolbox and pull out the tools you need to deliver that education and training in the most thorough and efficient way possible. Never forget, if there was only one tool that could do everything, Sears Craftsman would have invented it and they have not!



R. Kenneth Crim is the Joint Individual Education and Training Analyst for the TRADOC Capability Manager-Distributed Learning at the Army Training Support Center. Mr. Crim is a retired Navy Captain and Naval Aviator as well as a Joint Specialty Officer. He served in Desert Storm and as Chief of Operations, Multi National Force-Iraq, 2004-2005. He is a graduate of Georgetown University (BSBA), The Naval War College (MA), and Joint Forces Staff College.

Joint Knowledge Online is the enterprise portal system providing convenient access to online joint training and information resources.



http://jko.jfcom.mil/

Announcing the New Distributed Learning Contract

After many long months of waiting, the TCM-TADLP can finally announce the kick-off of the new Combined Arms Products for Distributed Learning (CAPDL) contract. The official kick-off session was held on December 13, 2011 at Ft. Eustis. This new contract offers more flexibility to our training and education community.

The CAPDL is the third TRADOC distributed learning contract vehicle for U.S. Army training and education. Proposals from eight Prime contractors qualifying as Small Business, 8(a) set-aside, were accepted and comprises the resources to execute the TCM-TADLP mission.

CAPDL Supports the Army Learning Model

This new contract supports the Army Learning Model, a learner-centric environment, and provides Army agencies the flexibility to use changing and emerging technology to meet their DL curriculum development objectives and requirements. Army agencies can procure a broad range of content, multimedia elements and targeted training and educational products using this contract. Proponents can request content, animations, or 3D modeling, for example, to complement any in-house production. Products supporting mobile technology can also be requested through the CAPDL contract.

CAPDL Requires Specific Reports and Surveillance

The CAPDL is a service contract with specific reporting and surveillance requirements. Proponents will appoint a Support Contracting Officer Representative (S-COR) to perform oversight of each CAPDL Task Order. They must also develop a Quality Assurance Surveillance Plan (QASP). Properly managed, a QASP will hold the contractor accountable for quality control and will encourage the contractor to take appropriate steps to improve

quality. The S-CORs will serve as Quality Assurance Evaluators and will report to the TCM-TADLP CORs who will evaluate the reporting and performance and authorize payments to the appropriate contractor. The CORs will develop a monthly schedule of surveillance activities based on the Performance Standards as outlined in the Performance Requirements Summary of each Task Order.

CAPDL Contact Information

Please contact Peggy Kenyon, peggy.l.kenyon.civ@mail.mil, 757-878-5066, DSN 826-5066 for more information.



Peggy Kenyon is Division Chief, Courseware Standards and Specifications, TCM-TADLP. Previously, she served as Senior Instructional Systems Specialist. Peggy has an MBA and an ED.S in Education

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http://www.facebook.com/pages/The-Army-Distributed-Learning-Program/135389573179664

USAICoE Leads Army Learning Model: Learning Innovation Office (LIO), Delivers Digital Training for Future Operational Environment

For the U.S. Army Intelligence Center of Excellence (USAICoE), Fort Huachuca, AZ, a substantial investment in the U.S. Army Learning Model for 2015 is paying off. USAICoE is building a hefty portfolio of newly redesigned instructional products that are facilitating lifelong learning for the 21st century Soldier. Predicting the tectonic shift to a learner-centric environment, USAICoE committed to digital learning 10 years prior to the U.S. Army Training and Doctrine Command's introduction of ALM 2015. A significant part of USAICoE's investment has been dedicated to expanding its number of digital classrooms from 21 in 2002 to 270 in 2012. "We are using technology where it fits to enhance educational experiences, not chasing the latest and greatest technology," stated MG Gregg Potter, commanding general of USAICoE and Fort Huachuca. "Integrating technology into our instruction is in line with changing the way we educate our Soldiers and the Army Learning Model."

A key component in the school's transformation to a new learning model is the Learning Innovation Office (LIO), USAICoE's in-house developer of interactive multimedia instructional (IMI) products. MG Potter visited the organization on Dec. 21, 2011, to receive updates on USAICoE's latest IMI products. He later announced plans to conduct quarterly site visits to the organization. LIO Director Leanne Rutherford stated that the commander's interest in the organization is encouraging. "The quarterly briefing will offer the Learning Innovation Office an opportunity to keep General Potter well-informed on projects in the analysis, design, development, implementation and evaluation phases," Rutherford said.

LIO Project Manager Michelle Austin stated that in

the past couple of months, six projects have either transitioned into the testing phase of development or the implementation phase of the analysis, design, development, implementation, evaluation (ADDIE) process. LIO projects in the final phases of completion include the Information Collection Guide, Afghanistan Cultural Awareness Guide, Military Intelligence History Course Virtual Tour, Fusion Analyst, Collection Asset Management Simulator as well as the Counterintelligence Special Agent Course Distance Learning and Surveillance Detection Route IMI.

Information Collection Guide

Capt. Lauren Hertling, commander of B Company for the 304th MI Battalion, recently worked with LIO on behalf of the Joint Intelligence Combat Training Center (JICTC) to create an Information Collection Guide. "The intent of the guide is to offer Military Intelligence Captain's Career Course (MICCC), Military Intelligence Basic Officer Leader Course (MIBOLC) (), 35F, and Non-Commissioned Officer Academy (NCOA) () students a greater understanding of what information collection platforms' capabilities and limitations look like and the type of products they can provide," Hertling explained.

Beverly Manigault, deputy director of JICTC, provided additional details on how the product will support training at the schoolhouse. "The Information Collection Guide will benefit the joint information collection planning and synchronization for USAICOE, Army Reserve and National Guard training," she said. Satisfied with the new product, Hertling stated that she believes the guide will accomplish JICTC's objectives, which include meeting requirements of ALM 2015. "Using technology as an enabler, JICTC is transitioning to a learner-centric training program," she said.

Hertling stated that the Information Collection Guide is among the organization's initial attempts at implementing ALM 2015. "It's the first interactive product of its kind for JICTC," she said. Describing it as a collective information source. Hertling stated that

the guide eliminates the need to view numerous slide shows and access websites. "It's a great learning tool — truly a one-stop shop for assets, capabilities and products that the guide can provide," she said.

Recalling her first time to view the product, Hertling stated that she was impressed with the depth of information and simultaneous comparison of assets. As a former collection manager, Hertling was able to offer valuable input into the development of the guide. "I provided various products for LIO to use alongside the assets as well as the asset capabilities," she said. Hertling stated that she was pleased with LIO and JICTC's effective work relationship. "We appointed one of our information collection subject matter experts to work on the project," she said. "He worked hand-in-hand with LIO's instructional designers and developers to ensure that it met the training requirements and student needs."

As the lead developer for the guide, LIO programmer Jose Martinez stated that he is pleased with the project and what it represents. "The Information Collection Guide is a great example of two organizations working together to create an innovative product that takes advantage of available technology," Martinez said. Manigault stated that plans are underway for the organization's next information collection project. "The next version will be upgraded to impact real world operations beyond TRADOC," she said.

LIO completed the Information Collection Guide in August 2011. It is currently awaiting a certificate of net worthiness. JICTC expects to add the product to its curriculum by April 2013. Upon implementation, the product will be hosted on the internal JICTC website. According to Austin, the Human Intelligence Training-Joint Center of Excellence, Weapons Intelligence Course and NCOA have requested customized versions of the Information Collection Guide.

Afghanistan Cultural Awareness Guide

In addition to the Information Collection Guide, JICTC also solicited LIO's assistance to develop an Afghanistan Cultural Awareness Guide to fill other training gaps. "Internal scenario evaluations and student after action review (AAR) comments indicated the need for a more efficient way of translating the unique and complex socio-economic system that exists in Afghanistan," stated Staff Sgt. Jeffrey Mitchell, JICTC exercise director, B Company, 304th MI Battalion. Representing JICTC, Mitchell collaborated with LIO to develop the Cultural Awareness Guide, which is in accordance with ALM 2015. "The guide will enhance students' ability to conduct background intelligence preparation of the battlefield information." he said. Intelligence Preparation of the Battlefield is the Army's longstanding methodology for incorporating and analyzing relevant information for all types of operations. Mitchell stated that the guide is multifunctional.

"While the Cultural Awareness Guide will primarily be used by students attending the JICTC exercise, observer trainers will also rely on it to convey factors not covered in other briefs," he said. According to Mitchell, the product's most unique function is the editing feature. "The guide will give observer trainers assigned to specific geographic areas the capability to modify and exemplify particular facts and factors based on their area of responsibility," he said. "This will, in turn, provide each student with specific information that can also be updated and modified as the socio-economic situation in Afghanistan changes."

LIO Generalist Chris Gonzales served as the lead developer for the Cultural Awareness Guide project. He discussed LIO's goals with this project. "We wanted to provide JICTC with a product that satisfied its need, yet be sustainable in the future," Gonzales said. "With this in mind, we developed a fully tailorable guide that will allow the organization to add custom information at its will, making the product completely adaptable to changing times."

Mitchell stated that LIO worked tirelessly to develop and perfect the product to JICTC's high standards and specifications. Impressed with their expertise, he stated that the instructional designers and developers assigned to the project were both well versed and imaginative. "This in itself assisted greatly in LIO developing a highly intuitive and comprehensive product that will positively affect JICTC's future training capabilities," Mitchell explained. Presently awaiting a certificate of networthiness, JICTC plans to incorporate the guide into its curriculum in early 2012.

The Information Collection Guide and Cultural Awareness Guide aren't LIO and JICTC's first collaborative projects. LIO previously worked with the organization to develop open-source intelligence videos, which involved writing and producing a series of news reports to promote situational awareness.

Military Intelligence History Course Virtual Tour

While LIO was collaborating with JICTC to meet their training needs, the organization was simultaneously teaming up with USAICoE's Command History Office to develop a virtual tour for the MI History Course. Encompassing the MI Museum and Army Intelligence Aviation Memorial Park as well as buildings around Fort Huachuca that are named for MI professionals, the virtual tour is helping USAICoE meet its training requirements.

Ruth Quinn, staff historian in the Command History Office, stated that TRADOC requires that Advanced Individual Training students obtain a 2-hour block of instruction in MI history. Quinn explained that the requirement was previously met by physically transporting students to the museum. "Since the onset of the wars in Iraq and Afghanistan, it became a logistical nightmare for Soldiers to acquire the MI History training," she said. "As a result, we identified the need for a product that would allow us to present the training in a virtual format." Fostering a student-centric environment, the virtual tour is helping the organization comply with ALM 2015 requirements. The virtual tour also benefits USAICoE students

stationed at Goodfellow Air Force Base, TX, and Pensacola, FL, allowing them to remotely take the required MI History training.

LIO's Principal Multimedia Specialist Thomas Gray and Visual Information Specialist Scott Haury developed the product's interactive components. Gray and Haury describe the virtual tour as very informational and user-friendly. "When students enter the virtual tour of the museum, they can view different areas and select specific exhibits," Gray said. "Within the exhibits, they can click on specific areas (e.g., an artifact) and the text associated with the artifact appears." Haury stated that the virtual tour of the memorial airpark is similar to the museum tour. "When choosing specific areas of the memorial airpark, interpretative panels appear," he said. "Selecting a section of the panel opens up an enlarged picture and the text associated with it comes into view." According to Haury, the virtual tour of the buildings is biographical in nature. "Clicking on the 'USAICoE Memorials' area of Fort Huachuca displays a menu of the various buildings by name," he said. "When selecting a particular building, the individual that it's named for appears as well as a picture of the plaque that's on the building and the text on the plaque." Haury added that the individual's most interesting contributions are also included in the information. "It was our intent that the people taking the virtual tour would not see anything less than those doing it physically," Quinn said. "However, because it is virtual, we were able to include additional information and make it more interesting."

As part of the project, LIO also worked with the Command History Office to develop a student exam. "When sending students into a museum, they may sort of browse around and not receive any quantifiable training, but the exam ensures that this doesn't happen," Quinn said. "The exam is basically our way of verifying whether or not students received the MI History training." Doug Whitney, computer engineer for LIO, developed the program that administers the exam. "The Command History Office

compiled a total of 165 questions," Whitney said. "From these questions, the program randomly draws a test of 25 questions for each student." He stated that of the 25 questions, 15 are dedicated to material learned in the museum, five encompass the memorial airpark and another five cover the buildings. "Students must pass the exam with an 80 percent," he said. "If they don't pass, they must download a different set of questions and retake the exam." Whitney said that once students pass, they are directed to print their certificate of completion, which is linked to a follow-up survey.

"The survey is an excellent opportunity for us to obtain feedback from the students," Quinn said. "It helps us to identify problems so we can fix them."

Command Historian Lori Tagg provided oversight on the project. "We have a product that does exactly what we need it to do — teach our Soldiers about the history of the MI Branch, whether they are in Afghanistan, at Fort Huachuca, Goodfellow AFB or Pensacola," Tagg said. "Ultimately, it is better than what we originally envisioned." Quinn elaborated that the organization originally envisioned a very boring static tour. "I'm very pleased with how LIO was able to not only make the tour visually appealing, but also interesting by increasing the text size, enlarging pictures and rearranging items," she said. Tagg and Quinn agreed that establishing open lines of communication was key in the project's success. "Working with LIO has been an enjoyable and productive experience," Tagg said. "They ensured that all of our questions were answered and concerns were addressed."

The MI History virtual tour is being hosted on the University of Military Intelligence. AIT students and civilians on Fort Huachuca can access the tour at https://www.universityofmilitaryintelligence.army.mil/C ampus/General%20Courses/Introductory%20MI%20 %20History%20Courses/Includes/Virtual%20Tour/index.html

Fusion Analyst

JICTC and the Command History Office are among several organizations, including the 305th MI Battalion's 35F Committee, using LIO's services to meet ALM 2015 requirements. "Most people focus on the cognitive aspect of learning, but part of ALM 2015 is incorporating the affective, emotional aspects into scenarios in order to create engaging learning experiences," stated Nelson Mitchell, training developer for 35F. "We are accomplishing this with Fusion Analyst." Mitchell acted as a liaison between the committee and LIO on the Fusion Analyst project.

"Fusion Analyst is a web-based intelligence analyst simulator game based on JavaScript," he said. "Analogous to a reinforcement tool, Fusion Analyst preps students for the S2 Game, previously developed by LIO." He stated that the game can also be played anytime to reinforce IPB steps. According to Mitchell, Fusion Analyst has a much wider target audience than the committee initially anticipated. "When the committee first started the project with LIO, we were thinking mostly of the 17- to 37-year-olds who are on FaceBook playing web-based games," he said. "Now, we are considering the use of mobile devices to reach a much larger Garrison or even deployment-based audience."

Among Fusion Analyst's features is the scenario editor, which Mitchell stated will be invaluable to the committee in its efforts to maintain a relevant, current product. "With the scenario editor, we are able to link our scenarios directly to our courseware," he said. "If there's a change in courseware, we can fix the scenario to match it, which facilitates rapid scenario development." The committee also considers the product's grid overlaying aspects an advantageous feature for students wanting to practice their military map reading skills. Additionally, Fusion Analyst includes a link diagram. Mitchell stated that this functionality enables students to practice their artful sense of crafting relationships between people, organizations and events. "It's a bonus

that USAlCoE's architecture completely supports the product," he said. "We can run Fusion Analyst on thin clients in the classrooms with no logistical issues."

Once 35F acquires a CoN and code review for Fusion Analyst, the product will be available on the Intelligence Knowledge Network-Secret portal. Mitchell hopes to add the product to the committee's curriculum during this quarter.

Collection Asset Management Simulator

For LIO, sometimes one product spurs the development of another. After viewing 35F's S2 Game, a trainer and his counterparts with the 304th MI Battalion's MICCC recognized the need for similar products within their curriculum. MICCC Training Specialist Jamie Tate stated that former MICCC Chief Maj. Frank Bird and former B Block Chief Maj. Mitchell Hale both agreed if the S2 Game could be modified to be more robust for captains; it would be a great addition to the course. "I thought that we might tailor the product to function as a reinforcing tool for our captains or as an initial viewing of products with a PE (performance exercise) preceding or following it," he said. Tate is coordinating with LIO to create MICCC's new product, CAMS.

CAMS consist of two IMI products, Operation Kanjhar Strike and Operation Kanjhar Storm. Operation Kanjhar Strike is a 2-dimensional game that will be employed in MICCC's B block of instruction. Tate stated that the 2D game will allow the organization to obtain individual grades for its students. "This game will give each student the opportunity to demonstrate their particular competencies," he said. "It may even prompt them to think differently than the collective group." Impressed with Operation Kanjhar Strike's interactive capabilities, Tate commented that among the game's top features will be its capacity to reward players with short video clips when activities are performed correctly.

A 3-dimensional game, Operation Kanjhar Storm is

Kanjhar Storm is being designed as a continuation game with the same characters and some of the same message traffic as Operation Kanjhar Strike," he said. To play the 3D game, Tate said it will not be necessary for students to recall specific events from the 2D game. "The 3D game is intended to focus on the COIN (counterinsurgency operations) side of the house," he said.

Capt. Luke Gosnell, executive officer of LIO, discussed how CAMS is helping MICCC further develop a blended learning environment for USAICoE. "With the 2D and 3D games, MICCC is using technology as an enabler to improve the course," Gosnell said. "By cultivating a blend of physical and virtual collaborative environments, MICCC and LIO are creating products that are realistic and in line with ALM 2015." "When these captains leave Fort Huachuca, they should have a better feel for what to expect out in the field," Gosnell added.

MICCC Chief Maj. Paul Gittins, Capt. Timothy Cullers and Capt. Michael Hall are serving as SMEs for the CAMS project. Once the products are completed, they will be housed on MICCC's internal server. Tate expects Operation Kanjhar Strike to go online during this quarter, with beta testing of Operation Kanjhar Storm to follow the reafter.

Counterintelligence Special Agent Course

Another project presently in development at LIO is a dL program and IMI for CISAC. According to LIO Education Technology Specialist Ryan Owens, the DL program uses multiple software applications within an Adobe Captivate player and features a score and feedback mechanism. "The IMI that we're building will support CISAC's SDR block of instruction," Austin said. "It will allow students to practice and receive feedback from instructors prior to a live exercise." She anticipates that LIO will complete the IMI project this quarter and dL program in May.

To request LIO's products and services, contact Austin at 520-533-7140 or michelle.l.austin20.ctr@mail.mil.

The organization's request for service form is located at

https://iknsp.army.mil/CMDGROUP/ltd/SitePages/Ho me.aspx



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